

**Chapter 8 Earthquakes and Earth's Interior****Section 8.2 Measuring Earthquakes**

*This section discusses types of seismic waves and how earthquakes are located and measured.*

**Reading Strategy**

**Outlining** As you read, fill in the outline with the important ideas in this section. Use the green headings as the main topics and the blue headings as subtopics. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook

Measuring Earthquakes	
I. Seismic Waves	
A. Body Waves	
B. _____	
C. _____	
II. _____	
A. _____	
B. _____	
III. _____	
A. _____	
B. _____	
C. _____	
IV. _____	

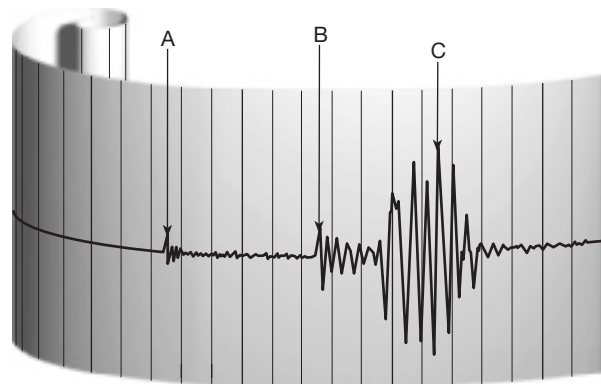
**Recording Seismic Waves**

1. Circle the letter of the type of seismic wave that shakes particles at right angles to their direction of travel.


- a. P waves
- b. S waves
- c. surface waves
- d. compression waves

2. The figure shows a typical recording of an earthquake. Select the appropriate letter in the figure that identifies each of the following types of seismic waves.

- \_\_\_\_\_ surface wave
- \_\_\_\_\_ S wave
- \_\_\_\_\_ P wave






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3.  Circle the letter of the name of the recording of the three types of seismic waves in the figure on page 57.
- a. seismograph                      b. seismogram  
c. seismic wave                      d. travel-time graph

**Measuring Earthquakes**


4.  What two types of measurements do scientists use to describe the size of earthquakes? \_\_\_\_\_

*Match each description with its term related to earthquake measurement.*

Description	Term
_____ 5. derived from the amount of displacement that occurs along a fault zone	a. intensity b. magnitude c. Richter scale d. moment magnitude scale
_____ 6. based on the amplitude of the largest seismic wave recorded on a seismogram	
_____ 7.  measure of the size of seismic waves or amount of energy released at the earthquake source	
_____ 8.  measure of the amount of earthquake shaking at a location based on damage	
9.  What measurement do scientists today use for earthquakes?	_____

10.  Why is the answer to question 9 the most widely used measurement for earthquakes? \_\_\_\_\_

**Locating an Earthquake**

11. Is the following sentence true or false? On a seismogram, the greater the interval is between the arrival of the first P wave and the first S wave, the greater the distance to the earthquake source.  
\_\_\_\_\_
12.  Is the following sentence true or false? You can use travel-time graphs from two seismographs to find the exact location of an earthquake epicenter. \_\_\_\_\_